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The Director of Central Intelligence

Washington, D.C. 20505

National Intelligence Council

NIC 03822-85

30 July 1985

MEMORANDUM FOR: Mr. Gary Crocker
State/INR/PMA

FROM: David B. Low
Acting National Intelligence Officer at Large

SUBJECT: CW Use Sample Data Report

1. We have received from FSTC and AFMIC the updated compilations of CW use sample data (see attached). We are, therefore, now in a position to accept your offer to convene and chair a meeting of relevant parties to draft a brief assessment of the significance and implications of the results obtained to date. The group should also address the question of whether or not the results can be made available for public release, and, if so, the form in which release should take place.

2. I would like to have this project completed by the end of August. An article by Matthew Meselson and his colleagues on Yellow Rain will be published in the September issue of Scientific American, undoubtedly raising the issue in the public consciousness once again. It would be useful to have our information in this area ready to be used by those who are likely to encounter questions.

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for David B. Low

Attachments:
As stated

ARMY review completed.

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DEPARTMENT OF THE ARMY

US ARMY FOREIGN SCIENCE AND TECHNOLOGY CENTER
220 SEVENTH STREET, NE.
CHARLOTTESVILLE, VIRGINIA 22901-5396

REPLY TO
ATTENTION OF:

July 22, 1985

Foreign Materiel Division

SUBJECT: Compilation of CW Use Sample Data

Director
Central Intelligence Agency
CIA/NIC (Mr. David Lowe)
Washington, DC 20505

Dear Mr. Lowe:

Enclosed is the compilation of data requested in your June 25, 1985 memorandum.

Please be advised this is raw data that has not yet been evaluated. Your memorandum suggests that this data will be considered for public release. It is the opinion of this organization that release should only be considered after time is allocated for the analysis of this and other data.

FSTC point of contact is Allan Steinert, Telephone number (804) 296-5171, extension 618.

Sincerely,


R. VAN AUSDALL
Acting Director
Materiel Exploitation

Enclosure (S NF)

NOT RELEASABLE TO
FOREIGN NATIONALS

UNCLASSIFIED WHEN
SEPARATED FROM
CLASSIFIED INCLOSURE

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19 JULY 85

/////////////////TOTAL SAMPLES////////////////////////////////////

YEAR	TOTAL	CONTAMINATED			CONTROLS		
		TOTALS	POSITIVE	NEGATIVE	TOTALS	POSITIVE	NEGATIVE
<=1981	247	197	38	120	30	0	28
1982	200	149	26	109	35	0	32
1983	209	167	7	102	21	0	15
1984	673	170	11	37	481	0	31
1985	66	57	0	0	9	0	0
TOTAL	1395	740	82	368	576	0	106

/////////////////BIOMEDICAL SAMPLES////////////////////////////////////

YEAR	TOTAL	CONTAMINATED			CONTROLS		
		TOTALS	POSITIVE	NEGATIVE	TOTALS	POSITIVE	NEGATIVE
<=1981	106	86	29	54	19	0	19
1982	139	108	25	69	24	0	21
1983	149	140	7	74	9	0	4
1984	486	106	3	21	379	0	30
1985	44	36	0	0	8	0	0
TOTAL	924	476	64	218	439	0	74

/////////////////ENVIRONMENTAL SAMPLES////////////////////////////////////

YEAR	TOTAL	CONTAMINATED			CONTROLS		
		TOTALS	POSITIVE	NEGATIVE	TOTALS	POSITIVE	NEGATIVE
<=1981	141	111	9	66	11	0	9
1982	61	41	1	40	11	0	11
1983	60	27	0	28	12	0	11
1984	187	64	8	16	102	0	1
1985	22	21	0	0	1	0	0
TOTAL	471	264	18	150	137	0	32

- NOTE: 1. TOTAL CONTROLS + TOTAL CONTAMINATED WILL NOT EQUAL TOTAL COLLECTED IN A GIVEN YEAR. SINCE AT TIME OF RECEIPT IT WAS NOT ALWAYS CLEAR IF THE SAMPLE WAS A CONTROL OR NOT.
2. POSITIVE + NEGATIVE WILL NOT EQUAL TOTALS SINCE SAMPLES MAY HAVE BEEN LOST, DESTROYED, NOT ANALYZED OR RESULTS ARE NOT YET REPORTED.
3. THIS DATA HAS NOT BEEN REVIEWED OR ANALYZED.
4. CERTAIN ASSUMPTIONS WERE NECESSARY TO GENERATE THIS REPORT, I.E., IF THE SAMPLE WAS NEITHER BLOOD, URINE OR HAD NO DONOR IT WAS CONSIDERED ENVIRONMENTAL
5. NO PARAMETERS FOR POSITIVES HAVE BEEN ESTABLISHED THEREFORE POSITIVES ARE REFLECTED IN THIS DATA REGARDLESS OF LEVELS FOUND.
6. TOTALS REFLECT ALL SAMPLES RECEIVED; SAMPLES ARE DEFINED AS EACH ITEM RECEIVED, I.E., IF 2 BLOODS AND 1 URINE ARE COLLECTED FROM A DONOR THEY ARE CONSIDERED AS THREE SAMPLES AND IF ALL SAMPLES ARE TESTED AND PROVE POSITIVE DATA REFLECTED HERE WILL SHOW 3 POSITIVES.
7. THIS DATA BASE IS NOT CONFIGURED TO MATCH CONTROLS TO VICTIMS, THEREFORE, THAT DATA IS NOT REFLECTED.
8. FURTHER QUESTIONS ABOUT DATA OR HOW IT WAS DERIVED CAN BE ADDRESSED BY AL STEINERT, FSTC AUTOVON 274-7617

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CLASSIFIED BY: CIA

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AFMIC-SA

5 July 1985

MEMORANDUM FOR

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SUBJECT: Compilation of CW Use Data

REFERENCE: Memorandum for MAJ John Weske, 25 Jun 85, subject as above.

(SECRET/NOFORN) In FY 84 and 85 AFMIC placed highest priority on the completion of the quality control experiment so that more than one laboratory could be used to evaluate the samples. The laboratories involved analyzed the same sample sets in order to provide a basis of comparison between laboratories. Of the five laboratories involved in the experiment, only two (A and B) are routinely analyzing samples for AFMIC. The other three have all analyzed occasional samples for us. A general summary of the results for all five laboratories is given below.

Table I.
Summary: Quality Control Experiment

Overall rate of false positives for T ₂	2.7% *
Overall rate of false negatives for T ₂	29.6%
Overall rate of false positives for HT ₂	0
Overall rate of false negatives for HT ₂	50%
Overall rate of false positive for tetraol	17.8% **
Overall rate of false negatives for tetraol	21.7%
Overall rate of misidentification*** of one toxin as another	5.3%

* False positives occurred in only one laboratory out of the five participating.

** Although the tetraol is the final metabolic product of both T₂ and HT₂ and so would be the ideal toxin to look for, the state-of-the-art for its detection is not yet reliable. Therefore, we will continue to base our assessments on T₂ and HT₂.

*** Misidentification is defined as the reporting of one toxin when a different trichothecene was used to spike. It is a special category of false positive.

(SECRET/NOFORN) With regard to this experiment, it should also be noted that Laboratory A had no false positives for T₂ or HT₂, the two toxins on which we have based our assessments. Laboratory B, however, did have a high rate of false positives for T₂. Because of these results, and the possibility for an occasional false positive in Laboratory A as well, we have assessed our data for FY 83 and FY 84 in the following manner:

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- An individual is reported as positive if multiple specimens are found to be positive for T₂ or HT₂. Data from Laboratory A are given greater weight than Laboratory B because of the difference in their performance in the quality control experiment.

FY 83 - Seventy victims and nine controls were assessed with multiple specimens analyzed on each. Four victims were found to be positive in two separate analyses by Laboratory A. An additional three victims were reported positive by both Laboratory A and B. In an additional 12 victims, positives were reported by one laboratory which were not confirmed by another analysis. All of the controls were reported negative by Laboratory A. Laboratory B reported one positive in a control, which was not confirmed by A.

FY 84 - Thirty-three victims and 97 controls were assessed with multiple specimens on each. Twenty-one specimens had no background information identifying them as victim or control and were not analyzed. One hundred-twenty-five specimens were broken in transit and could not be analyzed. In only one case were multiple specimens from a victim found to be positive by Laboratory A. (See summary attached at Enclosure 1.) Attempts to obtain further samples of tissue from CDC, and to analyze the formalin in which the tissue samples were contained, failed.

- In two victims, positives were reported by both A and B. In an additional eight victims, Laboratory B found positives in more than one specimen. In 18 victims, one laboratory reported a positive which could not be confirmed by the other. In the controls, one individual was reported positive in multiple specimens by Laboratory A. A re-examination of the data by the head of the laboratory resulted in his changing his graduate student's assessment to negative because the retention time did not exactly match. In an additional two controls both Laboratory A and B reported a positive. In eight controls, Laboratory B reported multiple positive specimens. In 46 controls, a tentative positive was reported that could not be confirmed by another analysis. It should be noted that the head of Laboratory B had expressed concern that they may have been too "anxious to find positives", and that various individuals assessing the data in his laboratory argued quite a bit about these samples because the fit for retention time wasn't quite right. Laboratory A is currently reassessing Laboratory B's spectra on a blind basis to determine if a correct interpretation was made.

(SECRET/NOFORN) Until this is completed, I think it is premature to include Laboratory B results in any summary. I also feel that raw numbers, such as requested by Mr. Dashiell, are easily misinterpreted. Many of the individuals classed as "victims" in such summaries experienced no symptoms, were sampled six months to a year after their exposure, or experienced symptoms that don't fit the pattern of trichothecene poisoning. In addition,

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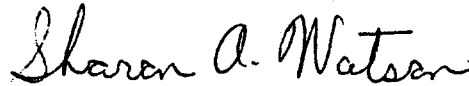
AFMIC-SA

5 July 1985

SUBJECT: Compilation of CW Use Data

many of the "controls" are meaningless because they come from Thai recruits who have a completely different culture, different food sources and habitats than the "victims" with which they are being paired. An honest two word assessment of the data that we have on hand for FY 83 and 84, in my opinion, is "inconclusive junk." If any use of the data is made, a careful assessment of each individual case will be necessary. Over simplified summaries are meaningless. It will be necessary to evaluate all relevant data from codeword on down, along with the sample results, as was done in 81 and 82 before any conclusions could be drawn.

(SECRET/NOFORN) In FY 85 we have received samples from 67 controls and 39 victims. These have been prioritized and analysis is in progress.



SHARON A. WATSON, Ph.D.
Research Toxicologist

Enclosure

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AFMIC-SA

30 January 1985

MEMORANDUM CHAIRMAN CW SAMPLE EXPLOITATION GROUP

SUBJECT: Interim Report on Sample Numbers TH-840403-1DL Through TH-840403-8DL

(SECRET/NOFORN) Tissue samples taken at autopsy from a Khmer Rouge allegedly exposed to a toxic substance near Taphrik, Kampuchea have tested positive for trichothecene mycotoxins. The victim was exposed to a sweet smelling "perfume-like substance" on 24 March 1984 as he walked in the jungle near his village. Within minutes of exposure, he experienced headache, vertigo, nausea, and fatigue. These symptoms increased in severity until the subject had difficulty walking. His wife brought him to the Taphrik Hospital on the morning of 25 March 1984. He developed vomiting and diarrhea, initially containing small amounts of blood and later with large amounts of blood. By the evening of 25 March, he had slipped into a coma. On 26 March 1984, he was transferred to the Medical Ward run by the Medecins San Frontieres at Khao I Dang where he died at 0900 27 March 1984. On the basis of their examination the physicians at Khao I Dang ruled out septic coma, hypoglycemic coma, hepatic or renal coma, and heart failure as possible causes of death. They concluded that death was probably due to inhalation of an unidentified toxic substance. A limited autopsy was performed and sections of stomach, intestine, heart, liver, brain, lung, spleen, and kidney taken. Gas chromatography-mass spectroscopy analyses of some of these tissues has revealed the presence of unusually high levels of HT₂, a metabolite of T₂. The lung section contained 129.6 ng/g HT₂, the heart 82.6 ng/g HT₂, and the stomach, 5.2 ng/g HT₂. Nivalenol another trichothecene, was also detected. Confirmatory analysis efforts are underway.

JIMMY WALKER
COL, MSC
Director

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The Director of Central Intelligence
Washington, D.C. 20505

National Intelligence Council

NIC 03270-85
25 June 1985

MEMORANDUM FOR: MAJ John Weske, AFMIC
Mr. Robert Lloyd, FSTC

FROM: David B. Low
Acting National Intelligence Officer at Large

SUBJECT: Compilation of CW Use Sample Data

1. During the May Warning and Forecast Meeting, DOD attendees Tom Dashiell and Doug Feith expressed interest in obtaining a comprehensive compilation of the results of analyses of environmental and biological samples from Southeast Asia and Afghanistan, with a view toward public release of the information. The attached tabulation has been provided by Mr. Dashiell as indicative of the level of detail required. I request that your analysts who have responsibility for this area update the table and return it to me by COB July 8, 1985.

2. I intend to convene a meeting to discuss sample results and their significance. Using the summaries prepared by your organizations as the springboard for the discussion, attendees will discuss the data and will draft estimative language to describe the significance of the results. Consideration will be given to the releasability of the material. The paper prepared by this group may be issued as a typescript with all participating organizations listed.

3. If you have any questions about this, please call [redacted]
[redacted]

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David B. Low

Attachment:
As Stated

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